CURRICULUM - VITAE OF PROF. AMIT KUMAR SAXENA

Personal Profile

Full Name	:	**AMIT KUMAR SAXENA**
Date of Birth	:	01-07-1965 (1st July 1965)
Highest Qualification:		Ph.D. Computer Science (1998)
Teaching Experience:		32 Years: In India and abroad
Permanent Position	:	Professor
		Dept of Computer Science and Information Technology Guru Ghasidas University, Bilaspur C.G. (A Central University) (www.ggu.ac.in) India
Phones	:	(+91) 9425222744, 9755124400
E-mail	:	amitsaxena65@rediffmail.com
Permanent Address	:	Dr. A.K.Saxena,
		Professor
		Dept of Computer Science and Information Technology
		27, Friends Residency, Nutan Chowk, Sarkanda
		Bilaspur-495001 (Chhattisgarh) – India
Nationality	:	Indian
Marital Status	:	Married

Academic Profile

- Awarded Ph.D. (Doctorate) degree in Computer Science in 1998, thesis titled **"Efficient *Computations of DSP Problems using Artificial Neural Network Techniques"*** from Guru Ghasidas University, Bilaspur (Chhattisgarh State, India) under the guidance of Prof. Ganapati Panda, Professor (Retired), IIT Bhubaneswar India and Prof. R.K.Singh, Former Vice Chancellor of Guru Ghasidas University, Bilaspur, India.

- 3- Years professional Master degree program Master in Computer Application (MCA) from M.I.T.S., Gwalior, Jiwaji University, India (www.jiwaji.edu) in 1990 with First Division and with a Distinction securing 75.4% marks

- Master of Science (M.Sc.) in Mathematics from Bundelkhand University, Jhansi, India (http://www.bundelkhanduniv.org) in 1986 with First Division, secured 70.5% marks.

- Graduated (Bachelor of Science) from B. B. College, Jhansi, Bundelkhand University, Jhansi, India (http://www.bundelkhanduniv.org) in 1984 with First Division securing 76.4% marks with Physics, Chemistry and Mathematics as major subjects.

Teaching Profile

- **Total Teaching Experience** 32 Years to Graduate and Post Graduate students at University level in India and abroad.

- **Academic Overseas Assignments**

  A. As a faculty member

  (2004) Worked as a Faculty Member in Arab Open University (AOU), Kuwait, (www.arabou.org) (September 2004-April 2005) in the Faculty of Computer Studies. The courses of the University are accredited by U.K**.** Open University.

  (2001) Worked as a Faculty member in the Faculty of Information Technology, Multimedia University (MMU), Malaysia (www.mmu.edu.my) (Feb2001- June 2002) at Cyberjaya campus.

  B. Research Assignments
  (2011) Visited Brain Research Center, National Chiao Tung University, Hsinchu, Taiwan. (www.nctu.edu.tw)

  C. As a key note/ Invited Speaker
  Thailand, Spain, USA, Taiwan

- **Major Courses Taught -** Data Structures, Operating Systems, Computer Programming Languages, C, Software development, Object Oriented Programming, Soft Computing, Data Mining, Information Technology, Computer Networks, Artificial Intelligence, Neural Nets and Fuzzy Logic, Pattern Recognition, Operation Research, Evolutionary Computing, Soft Computing, Machine Learning

- **Teaching Tools Used** - On line, L C D Projector, OHP, Class Room Teaching, online counseling, Open University environment, WebEx, Google Meet.

Research Profile
- **Research Specializations**

❖ Artificial Neural Networks and their applications,
❖ Soft Computing
❖ Data Mining, Rule Extraction from databases

❖ Evolutionary Computing, Swarm Intelligence, Particle Swarm Optimization
❖ Dimensionality reduction
❖ Feature selection in High Dimensional Databases
❖ Machine Learning

- **Post Graduate Students**
- **Ph. D. Guidance**

❖ Ph.D. Awarded : 04 (One each in 2006, 2012, 2019,2019 respectively) with following details of students
1. Hari Shankar Hota: Design of Neuro-Fuzzy Based Power Protection System – 2006
2. Abhishek Dubey: A Study of Classification Techniques Using Soft Computing – 2012
3. Vimal Kumar Dubey: Feature Selection Using Soft Computing Technique -2019
4.Madan Madhaw Shrivas: Classification Using Evolutionary Techniques – 2019
Two more students are registered and pursuing their PhD work

- **Dissertations/Projects Guidance to Post Graduate Students**

Guided more than 300 students for their Masters Degree Projects, (Post Graduate Diploma, Master in Computer Applications i.e. M.C.A. and M.Sc. -Computer Science) since 1990 till now. The topics of these projects include system analysis and design, management, inventory control, MIS, Information Technology, E-commerce, Data Mining and other important issues. As this is a part of the course curriculum of post graduate students (MCA, MSc), each student is assigned an internal supervisor (faculty member of the department) , he/ she may also opt for some industry staff as an external supervisor if he/ she plans to undertake the project work at the industry. The details of the students are not maintained categorically as the students have to do it mandatorily to qualify their post graduate and it is a routine procedure. Some recent important software development topics are as follows:

       i.   Vehicle rental booking
       ii.   Classification and regression based problems using soft computing techniques
       iii.   Online purchase of items
       iv.   Musical audio voices classification using deep learning
       v.   Feature selection
       vi.   Evolutionary computing

- **Significant Publications**

A. Journals

1. (2023) Chugh, D.; Mittal, H.;Saxena, A.; Chauhan, R.; Yafi, E.;Prasad, M. "Augmentation of Densest Subgraph Finding Unsupervised Feature Selection Using Shared Nearest Neighbor Clustering", Algorithms 2023, 16, 28. https://doi.org/10.3390/a16010028

2. (2022) Saxena, A.; Chugh, D.; Mittal, H.; Sajid, M.; Chauhan, R.; Yafi, E.; Cao, J.; Prasad, M. " A Novel Unsupervised Feature Selection Approach Using Genetic Algorithm on Partitioned Data". Adv. Artif. Intell. Mach. Learn. 2022, 2, 500–515. https://www.oajaiml.com/uploads/archivepdf/82321134.pdf **ISSN :2582-9793**

3. (2021) Hong, G.-J.; Li, D.-L.; Pare, S.; Saxena, A.; Prasad, M.; Lin, C.-T. Adaptive Decision Support System for On-Line Multi-Class Learning and Object Detection. Appl. Sci. 2021, 11, 11268. https://doi.org/10.3390/app112311268

4. (2021) Pare, S.; Mittal, H.; Sajid, M.; Bansal, J.C.; Saxena, A.; Jan, T.; Pedrycz, W.; Prasad, M. Remote Sensing Imagery Segmentation: A Hybrid Approach. *Remote Sens.* **2021**, *13*, 4604. https://doi.org/10.3390/rs13224604

5. (2021) Amit Saxena, John Wang, Wutiphol Sintunavarat, "An Empirical Study on Initializing Centroid in K-Means Clustering for Feature Selection", International Journal of Software Science and Computational Intelligence (IJSSCI) Volume 13, Issue 1, Jan_Mar 2021, pp. 1-16, 9781799860648. https://www.igi-global.com/gateway/issue/254095   ISSN: 1942-9045 EISSN: 1942-9037

6. (2020) Hsu, Ting W.; Pare, Shreya; Meena, Mahendra S.; Jain, Deepak K.; Li, Dong L.; Saxena, Amit; Prasad, Mukesh; Lin, Chin T.. "An Early Flame Detection System Based on Image Block Threshold Selection Using Knowledge of Local and Global Feature Analysis." *Sustainability* 2020**, *12***(21),** 8899; https://doi.org/10.3390/su12218899 -ISSN   2071-1050 https://www.mdpi.com/journal/sustainability/sections/energy_sustainability

7. (2020) Chang, Liang C.; Pare, Shreya; Meena, Mahendra S.; Jain, Deepak; Li, Dong L.; Saxena, Amit; Prasad, Mukesh; Lin, Chin T.. "An Intelligent Automatic Human Detection and Tracking System Based on Weighted Resampling Particle Filtering." *Big Data and Cognitive Computing*. 2020, *4*(4), 27; https://doi.org/10.3390/bdcc4040027 https://www.mdpi.com/journal/BDCC ISSN - 2504-2289

8. (2020) Amit Saxena , Shreya Pare , Mahendra Singh Meena , Deepak Gupta , Akshansh Gupta , Imran Razzak , Chin-Teng Lin and Mukesh Prasad, "A Two-Phase Approach for Semi-Supervised Feature Selection", Algorithms 2020, 13(9), 215; doi:10.3390/a13090215, www.mdpi.com/journal/algorithms ISSN 1999-4893

9. (2020) Chou, K.P., Prasad, M., Yang, J., Sheng-Yao Su, Xian Tao, Amit Saxena, Wen-Chieh Lin, Chin-Teng Lin " A robust real-time facial alignment system with facial landmarks detection and rectification for multimedia applications",

Multimedia Tools Appl Springer (2020). https://doi.org/10.1007/s11042-020-09216-7 ISSN 1380-7501

10. (2020) Neha Bharill, Aruna Tiwari, Aayushi Malviya, Om Prakash Patel, Akshansh Gupta, Deepak Puthal, Amit Saxena, Mukesh Prasad, " Fuzzy Knowledge Based Performance Analysis on Big Data," Neurocomputing, Vol. 389, 2020, pp. 218-228. https://doi.org/10.1016/j.neucom.2018.10.088 ISSN 0925-2312

11. (2017) Amit K. Saxena, Vimal K. Dubey & John Wang, "Hybrid Feature Selection Methods for High Dimensional Multi-class Datasets", Int. J. Data Mining, Modelling and Management, Vol. 9, No. 4, 2017, pp. 315-339. ISSN 1759-1171

12. (2017) Amit Saxena, Madan Madhaw Shrivas, "Filter – GA Based Approach to Feature Selection for Classification", International Journal on Future Revolution in Computer Science & Communication Engineering (IJFRCSCE), November 17 Volume 3 Issue 11 , PP: 202 – 212, ISSN- 2454-4248.

13. (2017) Amit Saxena, Mukesh Prasad, Akshansh Gupta,.Neha Bharill , .Om Prakash Patel, Aruna Tiwari, ..Er Meng Joo , .Ding Weiping, .Lin Chin-Teng A review of clustering techniques and developments, Neurocomputing, Vol 267,6 December 2017, pp. 664-681

14. (2017) Abhishek Dubey, Amit Sxaena, Vimal Dubey "A Binary Greedy Algorithm for Feature Selection and Classification", Enhanced Technologies and Recent Trends in ICT Symposium, Oman April-2016, International Journal of Science Progress and Research (IJSPR), 39 (110), pp. 23-29.

15. (2017) Amit Saxena, Madan Madhaw Shrivas, "Filter – PSO based approach for Feature Selection", in International Journal of Advanced Research in Computer Science (IJARCS), http://www.ijarcs.info, ISSN:0976-5697, Vol 8, No. 5, May – June 2017, , pp. 2063-2073.

16. (2017) Vimal K. Dubey & Amit K. Saxena, "A Cosine Similarity- Mutual Information Approach For Feature Selection on High-Dimensional Dataset". Journal of Information Technology Research,Volume 10, Issue 1, January-March, 2017, pp. 15-28 , ISSN: 1938-7857, EISSN: 1938-7865, http://www.igi-global.com/journal/journal-information-technology-research-jitr/1100

17. (2016) J. Singh, M. Prasad, O. K. Prasad, M. J. Er, A. Saxena, C. T. Lin, "A Novel Fuzzy Logic Model for Pseudo Relevance Feedback based Query

Expansion," Springer, International Journal of Fuzzy Systems, Vol. 18, No. 6, 2016, pp. 980-989.

18. (2016)Amit Saxena, Madan Madhav, "Leave One Out Cross Validated Hybrid Model of Genetic Algorithm and Naïve bayes for Classification Problem", in International Journal of Engineering Research and Application(IJERA), http://www.ijera.com, ISSN : 2248-9622, Vol. 6, Issue 3, March 2016, pp.107-114. (Part -4),

19. (2015) C T Lin, Mukesh Prasad, Amit Saxena, "An Improved Polynomial Neural Network Classifier Using Real-Coded Genetic Algorithm", IEEE Transaction on Systems, Man and Cybernetics: Systems, Volume: 45, Issue: 11, pp. 1389-1401, Nov. 2015, .

20. (2015)Madan Madhaw, Amit Saxena, L. Gavel, "A Review of Particle Swarm Optimization: Feature Selection, Classification and Hybridizations", International Journal of Recent and Innovation Trends in Computing and Communication, (IJRITCC), ISSN 2321-8169, Volume-3 Issue 4, April 2015, pp 1816-1820.

21. (2015) Amit Saxena, Vimal Dubey, "A Survey on Feature Selection Algorithms", International Journal of Recent and Innovation Trends in Computing and Communication, (IJRITCC), ISSN 2321-8169, Volume-3 Issue 4, pp 1895-1899, April 2015,.

22. (2015)Amit Saxena, L. Gavel, Madan Madhaw "Rough Sets: an Overview, Hybridization and Applications", International Journal of Emerging Science and Engineering™ (IJESE), ISSN 2319-7378, Volume-3 Issue 3, pp 17-26, January 2015,

23. (2014) Amit Saxena, L. Gavel, Madan Madhaw, "Rough Sets for Feature Selection and Classification: An Overview with Applications", International Journal of Recent Technology and Engineering™ (IJRTE), ISSN 2277-3878, Volume-3 Issue 5, November 2014:, pp 62-69.

24. (2013) Amit Saxena "On the importance of Ensemble of Classifiers", International Journal of Information Technology, Website: www.bvicam.ac.in (ISSN 0973-5658), Volume 5, No.1, June 2013,.

25. (2013) Amit Saxena, Apoorva Mondal, Itfaq Mir, "Improving the Classification Accuracy with Ensemble of Classifiers", International Journal of Emerging Technology and Advanced Engineering, Website: www.ijetae.com (ISSN 2250-

2459 (Online), An ISO 9001:2008 Certified Journal, Volume 3, Special Issue 2, pp. 52-56. , January 2013

26. (2011) Amit Saxena, D. Patre, Abhishek Dubey, "'An Evolutionary Feature Selection Technique Using Polynomial Neural Network", International Journal of Computer Science Issues, (www.IJCSI.org), Volume 8, July, Issue 4(1), Impact Factor 0.242, pp 494-502. http://www.ijcsi.org/issues.php , ISSN (print): 1694-0784, ISSN (online): 1694-0814

27. (2011) Amit Saxena, D. Patre, Abhishek Dubey " Investigating a novel GA-Based Feature Selection Method Using Improved KNN Classifiers", International Journal of Information and Communication Technology (IJICT), (http://www.inderscience.com) published by Inderscience Publishing House, Vol. 3, No. 3, pp. 274-288, ISSN:1741-8070, DOI 10.1504/IJICT.2011.041929.

28. (2010) Amit Saxena, Nikhil Pal, Megha Vora, " Evolutionary methods for unsupervised feature selection using Sammon's stress function" , Fuzzy Information and Engineering Volume 2, Number 3, 229-247, DOI: 0.1007/s12543-010-0047-4, Springer, ISSN : 1616-8658 (Print) 1616-8666 (Online) http://www.springerlink.com/content/1616-8658/2/3/ .

29. (2010) Amit Saxena, John Wang, "Dimensionality Reduction with Unsupervised Feature Selection and Applying Non-Euclidean Norms for Classification Accuracy", International Journal of Data Warehousing and Mining (IJDWM), (http://www.igi-global.com) Vol. 6, Issue 2, 2010, pp. 22-40, ISSN: 1548-3924.

30. (2010) Amit Saxena, D. Patre, Abhishek Dubey " An Analytical Review of Classification Methodologies", APEEJAY Journal of Management & Technology, vol. 5 (1) , pp. 27-37, Jan 2010, ISSN : 0974-3294.

31. (2009) Qureshi M.F.,Singh Ramesh Pratap, Saxena A.K, " Validation of Self-Organizing Map tuned Adaptive Neuro-Fuzzy Inference System (SONFIS) for Visualization and Rectification of Power System Problems", International Journal Association for the Advancement of Modelling & Simulation AMSE France (http://www.amse-modeling.com) Advances in Modelling, A, 82(3-4), pp 1-17.

32. (2008) Amit Saxena, H S Hota, "Fuzzy Sliding Mode Controller Design For Controlling The Structural Vibration of Multistoreyed Building" Journal of C.G. State Science and Technology and published by G.G. University, Bilaspur, India, Vol. 3 & 4 (2006,2007), pp. 157-168.

33. (2005) Amit Saxena, P K Dash, G Panda, "Lossless Data Compression using Neural Networks", published in Journal of Institution of Engineers, India, vol. 86, No., pp. 65-70. ISSN 0971-0469

34. (2004) Amit Saxena, Megha Kothari, "Development of a Fuzzy rule based System for measuring skill through games playing" published in the Journal of C.G. State Science and Technology and published by G.G. University, Bilaspur, India, Vol. 1(1), pp. 197-206.

35. (2003) Amit Saxena, A. Dwivedi, "Semi-Hypocycloid Membership Function for Fuzzy Systems" published in Bulletin of Pure and Applied Sciences (International Research Journal of Sciences), vol. 22E (2), 2003, pp 405-419. ISSN – 0970-6577

36. (2003) Amit Saxena, A. Dwivedi , "A Fuzzy Based Novel Approach for Comparing the Scanners" published in Bulletin of Pure and Applied Sciences (International Research Journal of Sciences), vol. 22E (2) pp 313-333. ISSN – 0970-6577.

37. (1997) Amit Saxena, R K Singh, G Panda, "Development of an Efficient Deconvolvor using Artificial Neural Network Technique" published in the Journal of Computer Science and Informatics, India, Vol. 27, No. 3., pp.23-33. ISSN 0254-7813.

38. (1996) Amit Saxena, R K Singh, G Panda "Computer Simulation of DSP Algorithm Using LMS Techniques", published in the Journal of Computer Science and Informatics, India, Vol. 26, No. 1, pp. 11-28. ISSN 0254-7813.

B. Papers Published in the Proceedings of International Conferences

1. (2022) D. Patel, A. K. Saxena, S. Laha and G. M. Ansari, "A Novel Scheme For Feature Selection Using Filter Approach," 2022 7th International Conference on Computing, Communication and Security (ICCCS), Seoul, Korea, Republic of, 2022, pp. 1-4, doi: 10.1109/ICCCS55188.2022.10079604.
2. (2021) S. Pare, M. Prasad, D. Puthal, D. Gupta, A. Malik and A. Saxena, "Multilevel Color Image Segmentation using Modified Fuzzy Entropy and Cuckoo Search Algorithm," 2021 IEEE International Conference on Fuzzy Systems (FUZZ-IEEE), 2021, pp. 1-7, doi: 10.1109/FUZZ45933.2021.9494443. ISBN 978-1-6654-4407-1
3. (2018) Mukesh Prasad, Shantanu Rajora, Deepak Gupta, Yousef-Awwad Daraghmi, Eman Daraghmi, Pranay Yadav, Prayag Tiwari and Amit Saxena, Fusion based En-FEC Transfer Learning Approach for Automobile Parts Recognition System accepted for IEEE Symposium Series on Computational Intelligence (SSCI 2018), pp 2193 - 2199 .
4. (2017) J. Singh, M. Prasad, Y. A. Daraghmi, P. Tiwari, P. Yadav, N. Bharill, M. Pratama, Amit. Saxena, "Fuzzy Logic Hybrid Model with Semantic Filtering Approach for Pseudo Relevance Feedback-based Query Expansion", IEEE SSCI, 2017, pp. 1-7..

5. (2016) Vimal K. Dubey & Amit Saxena, "A hybrid Classification model of correlation based feature selection and Support vector machine", in Proc. Of IEEE ICCTAC Conference, March-2016, DOI 10.1109/ICCTAC.2016.7567338, pp. 1-6.

6. (2016) Vimal K. Dubey & Amit Saxena, "Cosine Similarity Based Filter Technique for Feature Selection", IEEE Conference, Allahabad, DOI: 10.1109/ICCCCM.2016.7918222, pp. 1-6.

7. (2016) Vimal K. Dubey, Amit K. Saxena & Madan Madhaw Srivas, " A Cluster Filter Feature Selection Approach", IEEE ICTBIG, Nov. 2016, Indore MP, India, DOI: 10.1109/ICTBIG.2016.7892637, pp 1-5

8. (2015) Amit Saxena, Madan Madhaw, "Leave One Out Cross Validated GA K-NN Approach For Feature Selection In Classification", in Proc. International Conference on Emerging Research in Computer Science and Software Engineering, 21 November 2015, R D University, Jabalpur – India, pp 155-159, ISSN No. 2393-9931.

9. (2015) Vimal K. Dubey & Amit K. Saxena, "Sequential Cosine Similarity based feature Selection Technique for High-Dimensional Datasets", IEEE National Systems Conference, Ghaziabad, Dec-2015, **Electronic ISBN:** 978-1-4673-6829-2, **DOI:** 10.1109/NATSYS.2015.7489113, pp. 1-5

10. (2014) M. Prasad, D. L. Li, Y. T. Liu, L. Siana, C. T. Lin, A. Saxena, "A Preprocessed Induced Partition Matrix Based Collaborative Fuzzy Clustering for Data Analysis," IEEE International Conference on Fuzzy Systems (FUZZ-IEEE), 2014; 6-11 July,2014, Beijing, pp 1553-1558, DOI 10.1109/FUZZ-IEEE.2014.6891876. http://ieeexplore.ieee.org/xpls/abs_all.jsp?arnumber=6891876

11. (2014) M. Prasad, K. P. Chou, A. Saxena, O. P. Kawrtiya, D. L. Li, C.T. Lin, "Collaborative Fuzzy Rule Learning for Mamdani Type Fuzzy Inference System with Mapping of Cluster Centers," IEEE Symposium on Computational Intelligence in Control and Automation (CICA), 2014.Dec. 9-12, 2014, pp 15-20, DOI 10.1109/CICA.2014.7013227, http://ieeexplore.ieee.org/xpls/abs_all.jsp?arnumber=7013227&tag=1

12. (2011) Amit Saxena, D.Patre, "Feature Selection Using Polynomial Neural Networks", published in the Proc. of SCICT2011 (International Conference on Emerging Trends in Soft Computing and ICT), 16-17 March 2011 at Guru Ghasidas University, Bilaspur India, published by Excellent Publishing House, New Delhi, India, pp 70-73, ISBN – 978-81-920913-3-4.

13. (2008) Amit Saxena, Megha Vora, "Novel Approach for the use of Small World Theory in Particle Swarm Optimization", published in the Proc. of ADCOM2008

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(The International Conference on Advances in Computing 2008, 14-17 Dec. 2008 at Anna University, Chennai, India) pp. 363-366, IEEE Press, USA.

14. (2007) Amit Saxena, Megha Kothari, "Unsupervised Approach for Structure Preserving Dimensionality Reduction", published in the Proc. of ICAPR07 (The 6th International Conference on Advances in Pattern Recognition 2007) pp. 315-318, ISBN – 13 978-981-270-553-2, 10 981-270-553-8, World Scientific Publishing Co. Pte. Ltd. Singapore.

15. (2006) Amit Saxena **"**Intelligent mining of 3D Medical Images", published in the Proceedings of National Conference (18-19 Jan) on Cyber Security, Data Mining and ICT for the Society, at G G University, Bilaspur, India.

16. (2003) Amit Saxena "Rule Extraction From Binary Databases Using Neural Networks", published in the Proc. (CDROM) of National Seminar, (17-18 Jan.) at Rourkela, India.

17. (2002) Amit Saxena, "Soft Computing Techniques for Data Mining Using Wavelet based Data Compression", published in the Proc, International Conference (17-19 Nov) on . e- Manufacturing at Bhopal, India pp. 596-601. ISBN- 81-7484-066-4, Phoenix Publishing House Pvt Ltd, 2002.

18. (2001) Amit Saxena, "Neuro-controller for a nonlinear discrete time system", in Proc. (CD ROM) 3rd International Conference on Communications and Signal Processing, IEEE/ICICS '2001, 15-18 October 2001, at NTU, Singapore.

19. (2001) Amit Saxena "Neural Nets for Data Mining Applications in Rule Extraction", published in the   Proc. of IASTED International Conference, IMSA 2001, Aug. 13-16, Hawaii, Honolulu, USA. pp 274-277. ISBN- 088986-299-0, Acta Press.

20. (2000)**,** Amit Saxena "E-commerce: Challenges to benefit India", published in the proceedings of the National Conference (Feb. 18-19) on E-commerce at Hyderabad, India, pp.137-144,

21. (2000) Amit Saxena "Information Technology in 21st Century in India (Evaluation of I.T. Investment: Benefits and Risks)"published in the proceedings National Seminar (Jan-1) at S.P. University, Ballabh Vidyanagar, Gujarat, India

22. (1999) Amit Saxena, "ANN based adaptive equalizers", published in the proceedings of International Conference (CMSC'99, 1-3 Dec. 1999) Jaipur, India, pp. 341-347, ISBN- 0-07-463752-5, Tata McGraw – Hill Publishing Company Limited.

23. (1998) Amit Saxena, "An Efficient ANN Scheme for Identification of Nonlinear systems" published in the Proceedings of ICCS'98 at Delhi, India on 13-15 December 1998, pp. 48-57. ISBN- 81-7023-846-3, Allied Publishers Ltd.

24. (1998) Amit Saxena "Computation of Discrete Fourier Transform using L.M.S. Techniques", published in the Proceedings of Fifth National Conference (4-6 Sept) at Bhopal, India pp. 167-173.

25. (1996) Amit Saxena "Microcomputer Based Linear Deconvolver for Engineering Application" published in the proceedings of National Conference (20-21 January CONMICRO'96) at Bhubneswar, India.

26. (1994) Amit Saxena "An Efficient Data Communication Scheme Using Artificial Neural Network" published in the proceedings National Conference(23-24 April COMNET'94) at Patna, India pp. 78-83

C. Book Authored

1. **Book:** "C Programming – An Introduction**",** released in February 2007, ISBN- 13 978-81-88342-93-8; published by Anamaya Publishers, New Delhi, India**.**

D. Book Chapters

1. **(2013)** Amit Saxena, C T Lin, Mukesh Prasad, Book Chapter titled "Vertical Collaborative Fuzzy C-Means for Multiple EEG Data Set", Intelligent Robotics and Applications, Lecture Notes in Computer Science Volume 8102, 2013, pp 246-257, Springer Berlin Heidelberg , http://link.springer.com/chapter/10.1007/978-3-642-40852-6_26

2. **(2008)** Amit Saxena, Megha Kothari, Navneet Pandey, "Evolutionary Approach to Dimensionality Reduction" , Encyclopedia of Data Warehousing and Mining, Second Edition, Vol II pp 810-816, ISBN 978-1-60566-010-3 (hardcover) , ISBN 978-1-60566-011-0 (ebook), IGI Global,2008, http://www.igi-global.com/downloads/pdf/Wang810.pdf .

G. Book Edited
- Proceedings of International Conference on Soft Computing and ICT SCICT-2011 on 16-17 March 2011 at G G Vishwavidyalaya, Bilaspur India, ISBN – 978-81-920913-3-4

Important Academic Assignments

- Nodal Officer for MoU between G G University Bilaspur and UTAR, Malaysia 2021
- Reviewer of IEEE CEC 2021.
- External member in Board of Studies in Department of Computer Science and Engg, Shri Ramswaroop Memorial University, Lucknow, India, 2nd Aug 2020

- Member of International Advisory Committee for International Conference on Machine Learning and Signal Processing, https://www.misp.nitap.ac.in/ 23-25 September 2021 at NIT Arunachal Pradesh, India.
- Member of International Advisory Committee for International Conf. on Emerging Research in Science, Management and Technology, at Bilaspur University, Bilaspur 2018.
- Member of National Advisory Committee for ICKE-2016 at BAMU, Aurangabad
- Member of International Advisory Committee for ICERCSE -2015 (Int. Conf. on Emerging Research in Computer and Software Engineering)- at R D University, Jabalpur MP India
- Member of International Advisory Committee for ICIAC -2016 (Int. Conf. on Innovations and Advancements in Computing) at Gitam University, Hyderabad
- Member of Research advisory committee for Raghu Engineering College Visakhapatnam
- **Ph.D. (Computer Science) Examiner of** various Indian Universities including JNU, Delhi, AMU, Aligarh, BAMU, Aurangabad, NMU, Jalgaon, Jadavpur, Jiwaji University, Gwalior, Utkal University, Bhubaneswar, DAVV Indore etc.
- Reviewer of various journals/conferences including IEEE Congress on Evolutionary Computation (IEEE CEC 2021) Krakow, Poland on June 28 to July 1, 2021 (https://cec2021.mini.pw.edu.pl); Neuro Computing(2015), International Journal of Fuzzy Systems (2015), IEEE Access.
- Reviewer and International Technical Committee Member of International Conference on Computational Intelligence in Data Mining ICCIDM 2014, held at Sambalpur India, 20-21 Dec 2014, http://www.iccidm.in/ICCIDM2014/technical_committee14.php
- **Editor** of International Journal of Data Mining, Modeling Management (IJDMMM), ISSN (Online): 1759-1171 - ISSN (Print): 1759-1163, http://www.inderscience.com
- **Associate Editor** of Chhattisgarh Journal of Science and Technology, published by G G University, Bilaspur C.G.(India)
- **(2006**) **Reviewer of research Papers fo**r IEEE Asia Pacific Conference (4 - 7 December) on Circuits and Systems APCCAS 2006r 2006, Singapore.
- **(2006**) **Reviewer of research papers for** of 10th IEEE International Conference (30 Oct -02 Nov) on Communication Systems (ICCS'2006) Singapore.
- **(2006) Reviewer of research papers for** of M^2SIC 2006 to be held at MMU, Malaysia.
- **(1998) Reviewer of research papers** for International Conference CIT'98 at Bhubaneswar, India.

Distinguished Positions held in Administration and Corporate Life

- Convener, University Online Research Entrance Test 2023.
- Member of the Executive Council (Senate) of G G University, Bilaspur, India in 2008, 2011, 2022 (ongoing) for 3 years each.
- OSD, Administration
- Convener, , University Online Proctored Entrance Test Tendering Committee 2021

- Coordinator for Proctored Online Entrance Test for University (VET/VRET 2021)
- Head of the Department for more than 25 years.
- Criteria (VI) Coordinator of NAAC since 2019 at G G University, Bilaspur
- Dean, School of Studies in Mathematical and Computational Science G G University, Bilaspur, India on various terms, latest (2018-2021).
- Advisor/ Coordinator of Information Technology (IT) Cell at G G University, Bilaspur since 2017 with responsibilities including Campus Network, NKN, WiFi, ERP (IUMS), Samarth Project, Website Maintenance, Digital Payment, Video Conferencing and related activities.
- Convener of Smart-class rooms committee in 2021 for ICT enabled infrastructure at G G University, Bilaspur
- Convener of E-class rooms committee in 2018 for three E-class rooms, completed, 2018.
- Expert Member for Website Design and ERP committees at other Central University 2018.
- Member of Building Committee at G G University Bilaspur 2015 -2021.
- Member of the Library Committee of G G University since 2019 till now.
- In charge of maintenance of the entire computer System and other infrastructure of the department since 1992.
- In charge for website development and maintenance of official website of Guru Ghasidas Vishwavidyalaya, Bilaspur (www.ggu.ac.in)
- Dean, Faculty of Science, G G (State) University, Bilaspur, India
- Chairman, Board of Studies of Computer Science and Information Technology, on various terms, at G.G. University, Bilaspur, India. The job includes course designing, reviewing and introducing new courses time to time.
- Member of academic council and its standing committee of G G University Bilaspur
- Member of technical committee for purchase and maintenance of Computers and its peripherals, networking and software
- Member of Rajbhasha (Official language) Committee
- Chairman of Member of Committee for Medical policy and claims at G G University being the senior most Dean (2013-15)
- Member of selection committees for teaching positions in several institutions in India.
- Examiner for SET examination of various states.
- Member of several committees related to University affairs like time table, class room allotments, screening and webcasting of nation events etc.
- Officiating Vice Chancellor on various terms from time to time since 2018.

Conferences / Courses /Lectures Organized

- **(2016)** Organized a refresher course on Mathematics, Operation Research and Statistics, from ICT Applications from 01 Dec 2016 to 21 Dec 2016 as a course coordinator at Academic Staff College, G G University, Bilaspur India
- **(2013)** Organized a refresher course on ICT Applications from 14th Jan 2013 to 02nd Feb 2013 as a course coordinator at Academic Staff College, G G University, Bilaspur India

- (**2012**) Organized a One Day Workshop on National e-Governance plan (NeGP) by Dept of DeIT, New Delhi on 24th March 2012.
- (**2011**) Organized an International Conference on Soft Computing and ICT SCICT-2011 on 16-17 March 2011 at G G Vishvavidyalaya, Bilaspur India
- **(2010)** Organized a Training Workshop on Computer Hardware and Networking for University employees from 31st Jan 2010 to 3rd Feb 2010.
- **(2009)** Organized a Workshop on Data Mining by SPSS for University student and faculty on 28th August 2009.
- **(2008)** Organized a National Conference in the University on 11-13, Jan. 2008 on Interdisciplinary Approaches in Physical Science, jointly with other Physical Science Departments.
- **(2008)** Organized on 15th November, **2008**, one day lecture in the department by N.S.Choudhari, Faculty, N.T.U. **Singapore** on Language Structure using Fuzzy Similarity.
- **(2007)** Organized a National Seminar in the University on 17th Feb. 2007 on Data Mining and E-Governance.
- **(2006)** Organized a National Conference on Cyber Security, Data Mining and ICT for the Society on 18-19 January, 2006 at G.G. University, Bilaspur-India. The conference was sponsored by Ministry of Communication and Information Technology, India, (www.mit.gov.in:)
- **(2006)** Organized on 13th November, **2006**, one day lecture in the department by Bjarke Nielsen, the educational leader at DIIRWB ((Djursland International Institute of Rural Wireless Broadband) from **Denmark**.
- **(2003)** Organized a refresher course in Computer Science (27 March – 16 April 2003) at G.G.University Bilaspur India for participants from colleges and universities.
- **(2000) Organized** a National Conference on Soft Computing and Information Technology SCIT'2000 on 11-12 October, 2000 at G.G. University, Bilaspur-India.
- **(2000) Organized** a refresher course in Computer Science (17 Jan. 2000 - 05 Feb 2000) conducted at G.G. University, Bilaspur, India with over 70 participants from different colleges and Universities.

Invited Talks /Tutorials
- **Talks at International Level**

i. *(2022)* plenary talk on *Some Machine Learning Techniques* at International Workshop on New Trends in Theoretical Data Analysis and Computation Techniques during 1-2 September, 2022 at Thammasat University (Rangsit Campus), Thailand
ii. *(2019)* plenary talk on *Classification, Feature Selection with Soft Computing,* at event 'On new advanced analysis with applications to computing and economics' during August 23–26, 2019 at Thammasat University (Rangsit Campus), Thailand

iii. (2017) *Big Data, Internet of Things and Cloud Computing: Concepts and Issues,* International Conference on Data Science Analytics and Applications, Anna University, Chennai, 4-6 Jan 2017.

iv. (2015) *Soft Computing: A Soft Approach to take hard decisions* At International Conference on Artificial Intelligence, Robotics and Embedded Systems, AIRES 2015 Vishakhapatnam, 17 October 2015.

v. (2011) *Comprehensive Study on Evolutionary Computing*: At National Chio Tung University, **Taiwan** on 07 Dec 2011.

vi. (2011) *Polynomial Neural Network*: At the Neural Engineering Workshop, organized by Brain Research Center, National Chio Tung University **Taiwan**, on 21 Dec 2011.

vii. (2008) *A glimpse of Evolutionary Computing and Comprehensive demonstration of PSO and GA*: The IAENG International Conference Computer Science and Applications ICCSA 2008, at World Congress of Computer Science and Engineering WCECS 2008, 22-24 October 2008, **San Francisco, USA.**

viii. (2008) *Evolutionary Computation: A Comprehensive Methodology*-At The Twelfth IASTED International Conference on Artificial Intelligence and Soft Computing, ASC 2008, September,1-3, 2008, **Palma de Mallorca, Spain**

- **Invited Talks/ Tutorials at Local / National Level**

i. (2022) invited talk (Online) on Machine Learning organized by Govt. Digvijay Autonomous P.G. College, Rajnandgaon on 04-06-2022.

ii. Resource Person at several Refresher courses and Orientation Courses held at Human Resource Development Center (HRDC) G G University Bilaspur.

i. (2019) *Invited Talk on Soft Computing and Machine Leaning* at C V Raman University, Kota Bilaspur on 23rd Feb 2019.

iii. (2017) Keynote address on *Artificial Neural Networks: Basics, Types and Applications*, at PADAM 2017 Andhra University, Visakhapatnam, on 19th March 2017.

iv. (2015) invited talk *Big Data,* at National Seminar IRSMT-2015, at Bilaspur University, Bilaspur, India, on 30th March 2015.

v. (2013) invit*e*d talk *Artificial Intelligence: Concept and Applications,* at National Conference at Government Science College Bilaspur, CG

vi. (2012) invited talk *Ensemble of Classifiers* at National Conference at SMVD University, Jammu, India 21-23 Dec. 2012.

vii. (2009) *Decision Making using Ensemble Based Systems:* -At The Refresher Course in Sambalpur University, on 07th February 2009 in Sambalpur, India.

viii. (2009) *Computer Virus: Threats to Computing Paradigms:* -At The Refresher Course in Sambalpur University, on 07th February 2009 in Sambalpur, India.

ix. *(2008) Applications of Evolutionary Computation:* -At The Workshop September,28, 2008, NIT, Rourkela, India.

x. *(2008) Genetic Algorithms: An Insight with Applications-* At National Conference organized by Computer Society of India, Dehradun Chapter at Forest Research Institute, Dehradun, **India**, 09-10 Feb. 2008.

xi. *(2007) Genetic Algorithms: An Overview-* At National Conference organized by A.N. Institute of Technology and Science, Visakhapatnam, **India**, 21-22, Dec. 2007.

Design of Course Curriculum

Designed courses curriculum for Ph.D Computer Sc. , M.C.A.,(3 Year Master in Computer Applications, Post Graduate Program), M.Sc., 5 Year Integrated UG/PG Computer Sc, BCA (Bachelor in Computer Applications) both regular and through Distance Education, other certificate and diploma courses. Reviewed and updated courses contents from time to time.

Major Research Projects undertaken in India

(a) Completed a Major Research Project from University Grants Commission, New Delhi, (www.ugc.ac.in) India, granted for Rupees 7,00,000.00 (Approx.)

Coordination and Introduction of Courses

- Coordinator of Post Graduate courses such as Ph.D. Computer Sc., M.Sc. Computer Science, M.C.A., M.Sc. Information Technology, at GG University, Bilaspur C.G.

- Introduced and coordinated the courses of Post Graduate Diploma Course in Computer Science and Application (P.G.D.C.A.) (Semester pattern), P.G.D.C.A. (Part-time, evening course), M.Sc. (Computer Science), and M.C.A. Coordinator of P.G.D.C.A. and B.C.A. courses of Institute of Distance Education of G. G. University, Bilaspur, India.

- Coordinated an advanced certificate course for the bank executives in 1996.

Software Development Supervising Experience

- Guided Online Banking System, for online transactions of Banks in Malaysia, 2001. As a part of their course curriculum, guided a number of Post Graduate Diploma in Computer Applications (P.G.D.C.A.), M.Sc. Computer Sc. And M.C.A. students for their final semester software development and research projects.
- Programming Languages with proficiency: C, "C++", JAVA, Visual C, MATLAB.
- Application Packages: Dbase, Foxbase, M.S. Office, MATLAB, and other important software.
- Operating Systems worked with: DOS, UNIX, XENIX, WINDOWS, Macintosh.
- Website Hosting and Management: Maintaining website of the University (www.ggu.ac.in).

Credentials in Teaching
- (2001) Appreciation for excellence in teaching from The President, M.M. University, Malaysia for teaching of Neural Networks.
- Always excellent feedback (A) while teaching various courses at Post Graduate level
- Always excellent feedback (A) as a Resource Person at Faculty development Courses (Refresher, Orientation) organized by HRDC, GGV Bilaspur India

Membership of Professional Bodies
- Life member of Computer Society of India
- Senior Member of IEEE, USA, Computer Society

Social Contributory Services
- Organized short term programs for students of G G University like web site design, development.
- Organized computer training programs for the non teaching staff of G G University.
- Organized *Swachhchh Bharat Abhiyan* in department premise 2015.

Experience of working in Multilingual, Multicultural environment.

Served as a faculty member in Malaysia, Kuwait besides India with multicultured and multi-lingual people.

Google Citation https://scholar.google.com/citations?user=xkg-4nYAAAAJ&hl=en
Orcid ID 0000-0001-9465-0976
Vidwan ID 355343

Last Revised on 07 May 2023   **Amit Kumar Saxena**